

# 04 - Adversities and development

## Adversities and development

© SPMM Course Adversities and development A critical period is a time point when an individual is acutely sensitive to the effects of external influences - both positive and negative. This is usually defined by biological and psychosocial events. This concept is related to the notion that there is a gradually decreasing plasticity in functioning across the life span. But this is challenged by some observations that suggest, for example, that maturational tasks such as an attachment can be formed even at later ages. Early life is the period of most rapid brain development. Therefore, this period is a sensitive phase for both positive and adverse factors to influence human development. Severe neglect (e.g. in relation to institutional care) produces adverse consequences if it occurs in early rather than later childhood. Similarly, the effects of toxins (e.g. lead and alcohol) are far more dramatic when the exposure occurs in utero or in early life. Apart from early life, adolescence is also another critical period in life. Major life transitions influencing development occur during adolescence. On the basis of potential to cause enduring physiologic disruptions, 3 distinct types of stress responses are described in young children. □ Positive stress response - brief, mild response moderated by the availability of a caring and responsive adult. e.g. getting an immunization, anxiety associated with the first day at a nursery. When buffered adequately positive stress responses are growth-promoting opportunities. □ Tolerable stress response - associated with exposure to non-normative experiences with a greater magnitude of adversity. The e.g. death of a family member, a serious illness or injury. When buffered well the risk of physiologic harm and long-term consequences is greatly reduced. STRESS VULNERABILITY MODEL Zubin & Spring (1977) proposed the stress vulnerability model. According to this model mental illness, schizophrenia especially, is a result of two hits. The first hit is the vulnerability or predisposition of an individual that may be biologically or psychosocially determined. The second hit is the stress factor, which may act as a trigger or precipitant. This could also be biological, psychological or social. Low vulnerable individuals will require high degree of stress to develop an illness while highly vulnerable may respond to hairline triggers. In an interesting study of environment-gene interaction, Caspi et al (2003) noted that individuals with one or two copies of the short allele of the 5-HT T promoter polymorphism exhibited more depressive symptoms, diagnosable depression, and suicidality in relation to stressful life events than individuals homozygous for the long allele.